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International law and governance of the arctic in an era of climate change

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7.1 INTRODUCTION

7.1.1 Climate change and security policy

The effect of global climate change on the physical environment of the Arctic has already been extensively discussed in previous Chapters. The melting of the polar ice cap is opening up previously inaccessible parts of the region to ship traffic and resource exploration. Issues pertaining to maritime jurisdiction and boundaries in the Arctic Ocean and its adjacent seas are rapidly evolving. Many have expressed concern that growing rivalry over access to natural resources and shipping lanes in the region may lead to open political and/or military conflicts between the Arctic (coastal) States, or between Arctic and non-Arctic States.¹

The purpose of this Chapter is to explore the relationship between the effects of climate change and the multilevel issues of security in the northernmost part of the globe which has become increasingly relevant after the first invasion of Russia to Ukraine in 2014 which indicated the beginning of the stall of almost every Arctic Cooperation. This topic has received significant political and scholarly attention the last 15 years, particularly after the publication of the United Nations Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report in early 2007² and still remains a topic that will be covered by the next Assessment Report that will be discussed in April 2022 by the IPCC.³ The long-term implications of climate change for global and regional stability has also been placed on the policy agendas of NATO and the EU. Speaking at a conference in Reykjavik in 2009, NATO's Secretary General of that time, Jaap de Hoop Scheffer, touched on the topics of navigation,

1 S.G. Borgerson, *Arctic Meltdown, The Economic and Security Implications of Global Warming*, 87(2) *Foreign Affairs* 63 (2008); and M. Galeotti, *Cold calling: Competition heats up for Arctic resources*, 20(10) *Jane's Intelligence Review* 9 (2008).

2 The Fourth Assessment Report of the United Nations Intergovernmental Panel on Climate Change (IPCC) that was published at 2007 can be found at: <https://www.ipcc.ch/assessment-report/ar4/>.

3 The Sixth Assessment Report of the United Nations Intergovernmental Panel on Climate Change (IPCC) has been released in 2022 and will be available which are available online at <http://www.ipcc.ch/>.

resources, and territorial claims, and suggested that the Alliance could play a constructive role in maintaining stability in the High North:

“The Alliance’s agenda recently appears to have been dominated by events in Afghanistan, the Caucasus and the Horn of Africa – areas that can rightly be described as “hot”. So it is very welcome to shift our attention to a colder region. Having said this, the very reason we are focusing on the High North is because it may not remain so cold in the future. Here in the High North, climate change is not a fanciful idea – it is already a reality – a reality that brings with it a certain number of challenges, including for NATO. [...] Although the long-term implications of climate change and the retreating ice cap in the Arctic are still unclear, what is very clear is that the High North is going to require even more of the Alliance’s attention in the coming years”⁴

Similar signals have come from NATO’s Former Secretary General Anders Fogh Rasmussen, who called attention to the “potentially huge security implications” of climate change, saying NATO countries should use the Alliance as a forum in which to discuss and address the challenges it creates. He also called for active engagement with Russia in an effort to reduce security tensions in the Arctic.⁵ NATO’s former Supreme Allied Commander for Europe, Admiral James G. Stavridis, echoed this statement in a speech at the Royal United Services Institute in London.⁶ Finally, similar position has been taken by the current Secretary General of NATO, Jens Stoltenberg, during a panel discussion at COP26 taking place on November 2021 in Glasgow,⁷ showing the ongoing and intense concern on the issue of addressing the impacts of Climate Change under a security prospective.

Equally, the EU sees itself as a potentially important player in the Arctic region. Describing climate change as a “threat multiplier”, the European Commission and the High Representative for the Common Foreign and Security Policy have pointed out that environmental changes are “altering the geo-strategic dynamics of the Arctic” which may have “consequences for inter-

4 Speech by NATO Secretary General Jaap de Hoop Scheffer on security prospects in the High North, Reykjavik, Iceland, January 29, 2009, available online at <http://www.nato.int/docu/speech/2009/s090129a.html>.

5 Speech by NATO Secretary General Anders Fogh Rasmussen on emerging security risks, Lloyd’s, London, October 1, 2009, available online at http://www.nato.int/cps/en/natolive/opinions_57785.htm.

6 T. Coghlan, NATO commander warns of conflict with Russia in Arctic Circle, *The Times*, October 3, 2009, available at: <https://www.thetimes.co.uk/article/nato-commander-warns-of-conflict-with-russia-in-arctic-circle-hjt98ll78xd>.

7 The assessment of the opinions of Mr Rasmussen’s views developed in that panel discussion can be found at: <https://www.nato.int/docu/review/articles/2022/02/01/nato-an-unexpected-driver-of-climate-action/>.

national stability and European security interests".⁸ The EU developed an Arctic policy, the primary aim of which is to secure the Union's long-term economic interests in the region and promote "global climate security".⁹

Closely related to the concept of "climate security" is the concept of "environmental security", which has been an integral part of the political terminology of the United Nations ever since the launch of the Brundtland Commission's report *Our Common Future* in 1987.¹⁰ Following the end of the Cold War, efforts have been made – inside as well as outside the UN system – to widen the concept of security.¹¹ Simply put, the purpose of these efforts has been to include not only military threats, but also threats emanating in other areas (such as the environment, economy, society, and politics), and threats emanating from other levels than that of the State (global, regional, and individual).¹² The "wideners" do not constitute a homogeneous group as they are divided over how far to expand the concept. The "traditionalists" maintain that if the concept of security is extended to encompass almost every sphere of human activity, it may eventually lose its meaning.¹³ What both "wideners" and "traditionalists" seem to agree on is that the global security environment in the past three decades has undergone significant changes, and that this is affecting the role of military forces, as well as the nature of civil-military relations. For instance, the impacts of an ice-diminishing Arctic on naval and maritime operations have, in recent years, been the topic of a series of multi-agency symposia held at the U.S. Naval Academy.¹⁴

From a conceptual standpoint, environmental insecurity is fundamentally different from military insecurity because there are many arguments against

8 European Parliament, The European Union and the Arctic Region, Communication from the Commission to the European Parliament and the Council, 2008, available online at http://ec.europa.eu/external_relations/arctic_region/docs/com_08_763_en.pdf; European Commission, Climate Change and International Security", Paper from the High Representative and the European Commission to the European Council, March 3, 2008, available online at http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/reports/99387.pdf. The abovementioned Joint Statement has been reaffirmed with minor changes by the Parliament and the Council in 2017. The relevant Communication can be found at: <https://eur-lex.europa.eu/legal-content/EN/LSU/?uri=CELEX%3A52016JC0021>.

9 Please see at: https://www.youtube.com/watch?v=z_JDccpkMAM.

10 United Nations, Report of the World Commission on Environment and Development: *Our Common Future*, 1987, available online at <http://www.un-documents.net/wced-ocf.htm>.

11 See for instance the distinction between "state", "societal", and "human security" in Capable Force: Strategic Concept for the Norwegian Armed Forces, The Norwegian Ministry of Defence, 2009, available online at http://www.regjeringen.no/upload/FD/Dokumenter/Capable-force_strategic-concept.pdf, pp 19–21.

12 J. Kraska, Arctic security in an age of climate change, CUP (2011), available online at <http://ebooks.cambridge.org/ebook.jsf?bid=CBO9780511994784>.

13 *Ibid.*

14 Please see the following: <http://www.star.nesdis.noaa.gov/star/IceSymposium2009.php>; <https://www.navalengineers.org/Symposia/MACC-2018>; <https://www.usna.edu/History/Symposium/index.php>; <https://www.usna.edu/LeadershipConference/index.php>.

“securitising” the issue of environmental degradation.¹⁵ Threats to the environment are usually unintended, and often transcend national boundaries. They have to be dealt with in a collective manner, and usually by non-military means. Placing them in the same category as military threats may complicate, rather than facilitate, their prevention as it may promote State-centrism and “us-versus-them” thinking, rather than efficient collective responses. The key question is not whether the issue of environmental change deserves the attention of researchers and policy-makers, but whether it should be treated as a security issue. It can be argued that the challenges of environmental change can be addressed more successfully outside of the security context. Judging from the literature on climate change and security,¹⁶ the advocates of a “marriage” between the two concepts do not seem to share one and the same view of what the exact nature of the relationship is – in other words, what makes climate change a security issue?

A central but often neglected question is whether the impact of climate change on global, regional, national, or human security is direct or indirect. Some see climate change as a security issue in and of itself (because it threatens the natural environment, and ultimately the existence of the human race),¹⁷ whereas others are more concerned with the role of climate change as a potential driver of intra- and inter-State conflicts (because it may serve as a “multiplier” of other threats and lead to regional instability and violent conflicts).¹⁸ The latter perspective, focusing on the indirect effects of climate change on regional security dynamics, seems to have increased in prominence in recent years. This has come partly at the expense of the former, which is more general in orientation and inherently difficult to operationalise for

15 D. Deudney, *The Case Against Linking Environmental Degradation and National Security*, 19(3) *Millennium* 461 (1990); B. Buzan, *Environment as a Security Issue*, in *Geopolitical Perspectives on Environmental Security*, The Studies and Research Centre on Environmental Policies - Université Laval (P. Painchaud ed., 1992); R.H. Moss, *Environmental Security? The Illogic of Centralized State Responses to Environmental Threats*, in *Geopolitical Perspectives on Environmental Security*, The Studies and Research Centre on Environmental Policies - Université Laval (P. Painchaud ed., 1992).

16 Matt McDonald, *Climate change and security: towards ecological security?*, Cambridge University Press, 2018, available at: <https://www.cambridge.org/core/journals/international-theory/article/abs/climate-change-and-security-towards-ecological-security/228798050D9F11036FB72D9F2C84F70D>; Wilfrid Greaves, *Arctic break up: Climate change, geopolitics, and the fragmenting Arctic security region*, *Arctic Yearbook 2019*, available at: https://arcticyearbook.com/images/yearbook/2019/Scholarly-Papers/9_AY2019_Greaves.pdf.

17 C.K. Penny, *Greening the Security Council: Climate Change as an Emerging Threat to International Peace and Security*, 7 *Int'l Environmental Agreements: Politics, Law and Economics* 35 (2007).

18 M.J. Trombetta, (J. Scheffran et al., 2012), *supra*.

security analysts and political decision-makers.¹⁹ Examples of indirect effects of climate change on international peace and security include alterations in regional and global patterns of migration, and disputes over access to increasingly scarce natural resources and/or strategically important transport corridors in various parts of the world, including the “global commons”, meaning areas outside national jurisdiction.²⁰

7.1.2 Rising temperatures equate to rising tensions

Climate change is different from traditional military security challenges, but not necessarily less severe:

“Climate stress may well represent a challenge to international security just as dangerous – and more intractable – than the arms race between the United States and the Soviet Union during the cold war or the proliferation of nuclear weapons among rouge states today.”²¹

While recognising the severity of the challenge and the need for adequate countermeasures, conclusions should not be made about the security implications of climate change, or the relationship between climate change and armed conflict. Contrary to the conventional wisdom, there is no “consensus” among scholars that climate change causes conflict, regardless of other factors.²² The effect of climate change on armed conflict seems to be contingent on a number of political and social variables (such as the role of governments, political institutions, and social actors in managing the process of environmental change,

19 For a discussion of the relationship between “direct” and “indirect” environmental security risks and how they may affect (U.S.) national security, see M.A. Levy, *Is the Environment a National Security Issue?*, 20(2) *Int'l Security* 35 (1995). Joshua Busby distinguishes between the “territorial” and “extraterritorial” effects of climate change, see “J. Busby, Who Cares about the Weather? Climate Change and U.S. National Security”, 17(3) *Security Studies* 468 (2008).

20 See for instance M. Flournoy, S. Brimley, *The Contested Commons*, 135(7) *U.S. Naval Institute Proceedings* 16 (2009).

21 T. Homer-Dixon: *Terror in the Weather Forecast*, *The New York Times*, April 24, 2007.

22 Please see: Cristina Cattaneo, Michel Beine, Christiane J. Fröhlich, Dominic Kniveton, Inmaculada Martinez-Zarzoso, Marina Mastrotillo, Katrin Millock, Etienne Pigué, and Benjamin Schraven, *Human Migration in the Era of Climate Change*, *Review of Environmental Economics and Policy*, volume 13, number 2, 2020, available at: <https://www.journals.uchicago.edu/doi/abs/10.1093/reep/rez008?journalCode=reep>; Matthew T. Ballew, Anthony Leiserowitz, Connie Roser-Renouf, Seth A. Rosenthal, John E. Kotcher, Jennifer R. Marlon, Erik Lyon, Matthew H. Goldberg & Edward W. Maibach (2019) *Climate Change in the American Mind: Data, Tools, and Trends*, *Environment: Science and Policy for Sustainable Development*, 61:3, 4-18, DOI: <https://doi.org/10.1080/00139157.2019.1589300>; Thomas, K, Hardy, RD, Lazrus, H, et al. *Explaining differential vulnerability to climate change: A social science review*. *WIREs Clim Change*. 2019; 10:e565. <https://doi.org/10.1002/wcc.565>.

mitigating resource pressures, and containing tensions). Ignoring these variables could lead to poor predictions about when and where climate-induced conflict is most likely to occur, and how.²³ The link between climate change and armed conflict is, in other words, far from self-evident. Deterministic and apocalyptic statements about the security implications of climate change may easily turn into self-fulfilling prophecies, rather than help address the problem at hand. Before going into the complex dynamics of climate change and security in the Arctic, it is appropriate to consider the observations and findings of researchers who have studied the topic from a more general perspective, based on quantitative data from other parts of the world.

The causal links between climate change and armed conflict are extremely complex.²⁴ A central concept in the IPCC terminology is that of “vulnerability”, defined as “the degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change”.²⁵ States, groups, and societies that are able and willing to adapt to the consequences of climate change seem to stand a better chance of escaping its harmful effects than those that do not.²⁶ Conversely, societies that are unable or unwilling to adapt, may be left with little other choice than to move to more attractive locations, or engage in “resource conflicts” with their neighbours. This is the essence of the “threat multiplier” mechanism.²⁷ Resource scarcity is, as pointed out by Homer Dixon, “never a sole or sufficient cause of large migrations, poverty, or violence; it always joins with other economic, political, and social factors to produce its effects”.²⁸

To cultivate a detailed understanding of the relationship between climate change and armed conflict, we must explore the interplay between climate change and other factors in causing intra- and inter-State tensions through

23 I. Salehyan, *From Climate Change to Conflict: No Consensus Yet*, 45(3) *Journal of Peace Research* 315 (2008).

24 H. Buhaug, N.P. Gleditsch, O.M. Theisen, *Implications of Climate Change for Armed Conflict*, Paper presented at the World Bank workshop on Social Dimensions of Climate Change, Washington D.C., March 5–6 (2008); C. Raleigh, H. Urdal, *Climate Change, Environmental Degradation and Armed Conflict*, 26(6) *Political Geography* 674 (2007); J. Barnett, W. N. Adger, *Climate Change, Human Security, and Violent Conflict*, 26(6) *Political Geography* 639 (2007).

25 M.L. Parry, *et al.*, *Climate Change 2007: Impacts, Adaptation and Vulnerability*, Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press (2007), 6.

26 J.B. Wyman, *Climate Change Adaptation Strategies in New England*, *Climate Change Impacts on Ocean and Coastal Law: U.S. and International Perspectives* 479 (R.S. Abate ed., 2015); M.C. Boland, *Adapting Like the Animals: the Endangered Species Act as a Model for Human Adaptation to Climate Change*, 40 *Brooklyn Journal of Int'l Law* 247 (2014).

27 See for instance *Climate Change and International Security*, *op. cit.*, p. 2; and *National Security and the Threat of Climate Change*. Alexandria, VA: Center for Naval Analyses Corporation, 2014, at 44, available at: https://www.cna.org/cna_files/pdf/MAB_5-8-14.pdf.

28 T. Homer-Dixon, *Environment, Scarcity and Violence*, Princeton University Press (1999), 16.

mechanisms such as economic destabilisation, social fragmentation, and migration. Highly relevant in this regard are the political, economic, and social characteristics of the country or region in question as well as the role of potentially “stabilising” factors such as international law and multilateral governance and institutions. Economically developed and politically stable societies are better equipped to handle climate-induced environmental change than societies that are characterised by other conflict-prone features, such as “bad governance, large and heterogeneous populations, social inequalities, bad neighbourhood, and a history of violence”.²⁹ Thus, politically unstable and poorly developed regions such as sub-Saharan Africa may experience more severe consequences from climate change than politically stable, resource-rich, and relatively well institutionalised regions such as the Arctic.³⁰

Under certain conditions climate change may lead to rising tensions also in the northernmost part of the globe.³¹ The region’s growing economic significance, combined with several unresolved issues of international, and particularly maritime, law, add to the long-term conflict potential in the region. As the polar ice recedes, the region will become more accessible to State and non-State actors, and commercial activities such as fisheries, petroleum extraction, marine transportation, cruise traffic, polar research, and so on, are likely to increase. This may place new demands on the ability of Arctic States to maintain stability and provide on-site regulation of, and assistance to, new activities. The coast guard, naval, and air forces of Arctic coastal States may be required to take a more active role in areas such as resource management, ocean surveillance, search and rescue operations, border control and law enforcement at sea, strategic presence, etc.

The long-term security implications of climate change for Arctic States and societies are hard to predict, and there are many uncertainties associated with their nature, scope, and severity.³² This should not deter the research community from raising the issue and discussing it in a systematic manner. Failure to take the climatic factor into account in security policy and defence planning may leave governments poorly prepared to deal with the multi-faceted consequences of climate change in the Arctic. This will jeopardise vital economic and national security interests, and the political, military, and ecological stability of the region as a whole.

29 Buhaug, Gleditsch & Theisen (2008), *supra*, 20.

30 M. Akuno, J. Scheffran, On Raids and Relations: Climate Change, Pastoral Conflict and Adaptation in North-Western Kenya, in Conflict-Sensitive Adaptation to Climate Change in Africa 241 (U. Bob, S. Bronkhorst eds., 2014).

31 Seven things you need to know about Climate Change and Conflict, International Committee of the Red Cross, 2020, available at: <https://www.icrc.org/en/document/climate-change-and-conflict>.

32 T. Koivurova, Climate Change and International Security, in International Law and Changing Perceptions of Security: Liber amicorum 171 (S. Mahmoudi J. Ebbesson, M. Jacobsson, M. Klamberg, D. Langlet, P. Wrangé eds., 2014).

This Chapter consists of four sections. Section two delves into the topic of Arctic climate change, based on findings made *inter alia* in the Assessment Reports of the IPCC (2007/2021) and in the Arctic Council's Arctic Climate Impact Assessment (ACIA, 2013) in order to explore the "direct" (environmental) security implications of climate change. Section three sheds light on the "indirect implications," that is, the effects of climate change on the intra- and inter-State conflict potential in the region. The report's findings and conclusions are summarised in the fourth and final section.

7.2 THE CONFLICT POTENTIAL IN THE ARCTIC

In addition to its direct effect on the physical environment of the Arctic, climate change can also affect the region indirectly because it can serve as a "threat multiplier", potentially aggravating disputes and conflicts within and between States.³³ Throughout the 21st century, changes such as the ones outlined in this Chapter may alter the scope and level of human activity in the Arctic, or at least parts of the Arctic, with potential implications for the relationship between various State and non-State stakeholders in the region. Even in the medium term – the period up to 2030 – governments as well as international and regional organisations involved in Arctic affairs may have to deal with a wide range of security concerns. Many of the emerging security concerns are linked to activities such as oil and gas extraction, fisheries, and marine transportation, all of which can be facilitated by the dynamics of climate change. Contrary to the situation during the Cold War, the conflict lines of the 21st century Arctic will not necessarily follow traditional alliance patterns ("NATO vs. Russia"), let alone land, sea, and shelf borders between States. Such intra- and inter-State disputes may vary in severity, intensity, and duration so their containment may require not only the presence of military capabilities, but also robust international regimes and institutional arrangements.

7.2.1 Conflicts between interest groups and sectors

As pointed out by Gail Osherenko and Oran Young:

"[t]he landscape of Arctic conflict [...] constitutes a complex mosaic rather than a unidimensional pattern featuring a single dominant cleavage or axis of conflict. The interest groups holding significant stakes in the region do not line up on the

33 V. Prescott, C.H. Schoffield, *The Marine Political Boundaries of the World*, Martinus Nijhoff (2nd ed., 2005), 20-26.

same side of each and every issue. Rather, Arctic conflicts form a pattern that political analysts describe in terms of the concept of cross-cutting cleavages.³⁴

The term 'cross-cutting cleavages' refers to a situation in which (here: sub-State) actors and interest groups simultaneously have converging as well as diverging interests on others. Local communities and native groups in the Arctic may for example find it to be in their interest to ally with the oil industry and lobby for projects that can create new jobs and income opportunities. On other occasions, local actors may be inclined to oppose industrial projects and more likely to join forces with environmentalists in the protection of ecosystems. Thus, "[i]n the Arctic, your opponent today may well turn out to be your ally tomorrow".³⁵

The presence of cross-cutting cleavages is generally believed to have a stabilising effect on political communities.³⁶ The lack of a clearly defined "front line" along which all or most States can line up, and the recognition that sub-State actor relations in the Arctic have undergone significant changes in the past and probably will continue to so, may serve as an incentive for actors to behave with restraint in region- or period-specific conflict situations.³⁷ Take for instance the relationship between the Russian military and the petroleum industry in the Barents Sea region, which in the course of the 1990s went from a state of rivalry to a state of pragmatic partnership.³⁸ Still, there is no denying that some 'cleavages' are deeper than others. The surge in interest shown towards the Arctic as an arena for economic activity may sharpen intra-State conflicts and complicate the relationship between, for example, industrial entrepreneurs, and native groups who perceive their livelihoods to be at stake.

Often, sub-State actors voice their concerns in terms of "security", suggesting that someone or something is "threatened" by an on-going or planned development.³⁹ The challenge, seen from a political perspective, is that their respective security agendas are not always compatible. The State-centric "hard security" agenda of military establishments, typically focusing on the maintenance of political and military stability in the region, may not necessarily be compatible with the "energy security" agenda of industrial actors, which again

34 G. Osherenko, O. R. Young, *The Age of the Arctic: Hot Conflicts and Cold Realities*, Cambridge University Press (1989), 168.

35 *Ibid.*

36 T. Dunning, L. Harrison, *Cross-Cutting Cleavages and Ethnic Voting: An Experimental Study of Cousinage in Mali*, *American Political Science Review* (2010), available online at http://isps.yale.edu/sites/default/files/page/2013/06/dunning_4.24.09_paper.pdf.

37 *Ibid.*

38 For details, see K. Åtland, *Russia's Northern Fleet and the Oil Industry – Rivals or Partners?*, 35(2) *Armed Forces & Society* 362 (2009).

39 This is the case with some Indigenous Communities in the Arctic especially in locations where these communities are the vast majority of the population, and the central government does not take into consideration their concerns and objections.

may be incompatible with the “environmental security” agenda of environmental NGOs, or the “societal” or “human security” agenda of indigenous or other groups. In the Arctic, as elsewhere, “threats” may emerge not only at the State level, but also at the level of societies and groups. The same goes for the mobilisation of various forms of counter-measures against the perceived threats.⁴⁰

Conflicts of interest between various sub-State and non-State actors are likely to arise several places in the Arctic in the coming decades, without necessarily jeopardising the political stability of individual countries or the region as a whole. Many of the conflicts and disputes will have to be sorted out at the local level, through negotiations, private bargaining, or in court. Others will have to be addressed at the governmental level. Each Arctic State will have to formulate its priorities and find ways to balance its sometimes conflicting economic, environmental, and military security interests in the region. Overarching “Arctic strategies”, such as the ones that have been formulated by a number of Arctic States in recent years,⁴¹ can be helpful insofar as they lay down some basic goals and principles for future activities.

7.2.2 Conflicts over access to petroleum resources

In 2008, the EU published a report titled *Climate Change and International Security*, which, *inter alia*, touches on the topic of climate-induced resource conflicts in the Arctic. In the report, the European Commission and its High Representative for Foreign and Security Policy argue that “the increased accessibility of the enormous hydrocarbon resources in the Arctic is changing the geo-strategic dynamics of the region with potential consequences for international stability and European security interests”. This development is, in the words of the Commission, “illustrated by the recent planting of the Russian flag under the North Pole”. The report calls attention to “the intensified competition over access to, and control over, energy resources”, and

40 However, within the domain of “hard security”, the state level has traditionally been privileged, and this is likely to remain the case. All armed forces operating in the Arctic, including the High Seas, are regular forces controlled by states, particularly states that have prominent strategic and/or economic interests in the region.

41 Very good examples in this respect are the Russian Strategy Plan on the Arctic available online at http://isps.yale.edu/sites/default/files/page/2013/06/dunning_4.24.09_paper.pdf and the Norwegian at https://www.regjeringen.no/en/dokumenter/report_summary/id2076191/; the USA Arctic Policy can be found at: <https://www.state.gov/key-topics-office-of-ocean-and-polar-affairs/arctic/>.

maintains that “there is an increasing need to address the growing debate over territorial claims [in the Arctic]”.⁴²

The United States has used the potential for resource-related conflicts in the Arctic as an argument in favour of strengthening the US Navy. In the “Cooperative Strategy for 21st Century Seapower”, it is argued that “climate change is gradually opening up the waters of the Arctic, not only to new resource development, but also to new shipping routes that may reshape the global transport system”. These developments may offer new opportunities for economic growth, but they are also, in the words of the Strategy, “potential sources of competition and conflict for access and natural resources”.⁴³

Concerns that rivalry over access to Arctic petroleum resources may lead to increasing inter-State tensions are also common in the Russian political discourse. For instance, shortly before the Russian North Pole expedition, the former director of a Moscow-based foreign policy think tank,⁴⁴ Dr. Vladimir Frolov, published an article in the Russia Profile magazine titled “The Coming Conflict in the Arctic”. In this article, he argues that “Russia needs to find new sources of fuel” and that “the Arctic seems like the only place to go”. The fact that international law does not recognise Russia’s right to the entire Arctic seabed north of the Russian coastline is described as a “problem”, and the United Nations’ non-acceptance of previous Russian claims in the region is largely blamed on the United States. The United States is, in Frolov’s terminology, “jealous of Russia’s attempts to project its dominance in the energy sector”, and potentially disposed “to intrude on Russia’s home turf”.⁴⁵

Statements such as these may indicate that there is a tendency among several Arctic States to regard their northern neighbours as potential “rivals” and “competitors” in the quest for oil and gas resources on the Arctic continental shelf. It is also possible that current legal disputes in the region may acquire increasing significance in the period up to 2030, possibly leading to an increase in the coastal States’ military presence in the region. But to suggest

42 European Commission, Climate Change and International Security, Paper from the High Representative and the European Commission to the European Council, March 3, 2008, available online at http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/reports/99387.pdf, at 4, 6. Mr Xavier Solana, in 2018, has further elaborated in that respect in a joint Paper with the European Commission submitted to the European Parliament, available at: https://www.consilium.europa.eu/media/30862/en_clim_change_low.pdf.

43 United States Navy, A Cooperative Strategy for 21st Century Seapower, October 2007, available online at <http://www.navy.mil/maritime/MaritimeStrategy.pdf>; The report has been updated in 2015 incorporating the potential conflict with Russia over the Arctic overlapping claims and can be found at: https://www.globalsecurity.org/military/library/policy/navy/21st-century-seapower_strategy_201503.pdf.

44 The National Laboratory for Foreign Policy, 09/01/2017, available at: <https://www.directives.doe.gov/directives-documents/400-series/0485.1-APolicy/@@images/file>.

45 V. Frolov, The Coming Conflict in the Arctic, Russia Profile, July 10 (2007), available online at <http://www.russiaprofile.org/page.php?pageid=International&articleid=a1184076124>.

that inter-State “resource wars” are looming in the background seems somewhat far-fetched. For all States concerned, the use of military force in the Arctic Region is seen as a last-resort.⁴⁶ Even though the stakes are high, most international powers would prefer to play by the rules of international law, as failure to do so would alienate the sympathy of foreign investors.⁴⁷ Also, there seems to be a growing recognition among Arctic States that they are facing a “security dilemma”, and that unilateral moves could set off an “arms race” that none of the States want.⁴⁸

As Barry Zellen points out, military power will continue to have its place in the region, and to some extent determine the availability of resources but, in the most likely scenario, “it is science that will define the new boundaries”.⁴⁹ Uncertainty and disagreements over borders and jurisdiction on the Arctic continental shelf may be gradually replaced by certainty and agreement, as the outer limits of each Arctic State’s offshore domain are clarified through undersea mapping, agreed-upon legal procedures, and bilateral negotiations. Some of the disputes may be more difficult to resolve than others, or just take longer time to settle, but there seems to be more patience among the involved stakeholders than is generally recognised. One of the reasons for this is that most of the currently known and, in theory, extractable oil and gas resources on the Arctic shelf are located in areas of unchallenged national jurisdiction. Economically, as well as politically, it would make little sense for a country that has access to unexploited fields on land or in undisputed waters relatively close to the shore to embark on costly offshore projects in disputed, and possibly ice-infested, waters further from the coast.

However, when discussing the long-term conflict potential in the Arctic, one should also be aware of the potential for disagreement between the “Arctic five” (the Arctic coastal States) and the remaining three members of the Arctic Council (Iceland, Sweden, and Finland), and, perhaps more problematic, between Arctic and non-Arctic States. Should an “outside” actor such as China suddenly establish a significant presence in the region for commercial, military or other purposes, this could lead to frictions with the established community of Arctic States.⁵⁰ The involvement of third-party actors in the exploration

46 E. Massingham, Military intervention for humanitarian purposes: does the Responsibility to Protect doctrine advance the legality of the use of force for humanitarian ends?, 91 (876) *International Review of Red Cross* (2009), available online at <https://www.icrc.org/eng/assets/files/other/irrc-876-massingham.pdf>.

47 R. Howard, *The Arctic gold rush: the new race for tomorrow’s natural resources*, Continuum London Publishing Group (2009), 19.

48 Julie Wilhelmsen, *Spiraling toward a New Cold War in the North? The Effect of Mutual and Multifaceted Securitization*, 2020, OUP, available at: <https://academic.oup.com/jogss/article/6/3/ogaa044/5916402>.

49 B. Zellen, *Arctic Doom, Arctic Boom: The Geopolitics of Climate Change in the Arctic*, Praeger (2009), 113.

50 R. Howard (2009), *supra*, 21–22.

or exploitation of resources in disputed areas could also have a destabilising effect on inter-State relationships.

7.2.3 Conflicts over access to marine resources

The Arctic seas contain some of the world's oldest and richest commercial fishing grounds, and fisheries constitute an important part of the economies of many, if not all, Arctic States. As documented in the Arctic Council's Arctic Marine Shipping Assessment 2009 Report, fisheries are particularly extensive in the Norwegian and Barents Seas, and the eastern part of the Bering Sea.⁵¹

The long-term impact of climate change on fish stocks in these and other waters adjacent to the Arctic Ocean is hard to predict, but the most likely scenario is that the stocks will gradually move northwards as sea temperatures heat up. A study conducted by the US Arctic Research Commission in 2014 concluded that "climate change is likely to bring extensive fishing activity to the Arctic, particularly in the Barents Sea and Beaufort-Chukchi region [...]", and that "Bering Sea fishery opportunities will increase as sea ice cover begins later and ends sooner in the year".⁵² The abovementioned was adopted as a relevant challenge by all Arctic Member States and was the basis of their Moratorium on Fisheries Rights in the Central Arctic Ocean agreed in 2016.⁵³

A relevant question is whether and how the northwards movement of fish stocks, possibly accompanied by a decline in stocks further south, will have an impact on inter-State relations in the region, and the relationship between Arctic and non-Arctic States. Fishery disputes may arise not only between neighbouring coastal States, such as Norway and Russia in the Barents Sea (including the Svalbard Zone), but also when coast guard vessels act to protect the region's marine resources from extensive harvesting by boats from distant regions. Tensions may also arise when stocks migrate from the waters of one country into those of another. An example of this is the migration of Alaskan snow crabs from traditional locations off the coast of Alaska towards Russia's north-eastern coastline. Another category of challenges relates to the northward movement of fish stocks into areas of the High Seas that are unregulated by fishing quotas.⁵⁴

Inter-State disputes over access to marine resources in contested areas of the ocean are not a new phenomenon. Frequently cited examples of so-called "fish wars" are the British-Icelandic "cod wars" in the North Atlantic (1958-61,

51 AMSA Report, 2009, online available at: <https://oaarchive.arctic-council.org/handle/11374/54>.

52 The Arctic Ocean and Climate Change, A Scenario for the US Navy, United States Arctic Research Commission Publications, No. 02-1, 2014, cited in R. Howard (2009), *supra*, 97.

53 See for example: <https://thebarentsobserver.com/en/arctic/2021/06/central-arctic-ocean-fishing-moratorium-comes-effect>.

54 R. Howard (2009), *supra*, 97.

1973-73, and 1975-76), the Norwegian-Icelandic dispute over fisheries in the Svalbard Fisheries Protection Zone (1994), and the Canadian-Spanish/EU “turbot war” on the Grand Banks off Newfoundland (1995). In the North Pacific, Russia and Japan have had a long-standing dispute over fishing rights in the waters around the disputed Kurile Islands, occasionally leading to the use of military force.⁵⁵ All of these clashes included various forms of “extraordinary” measures being undertaken in the name of a State against one or more fishing vessels of another State. Such measures included the firing of warning shots, trawls cuttings, seizure of ships and/or crews, deliberate ramming, and live fire aimed at the hull of fishing vessels.

Fishery-related disputes rarely escalate to the level of sinking of ships and loss of life. Statistically, the use of military force in fishery disputes is rare, and when force is used, it is rarely reciprocated. In other words: inter-State fishery disputes rarely get “militarised,” in the sense of leading to the exchange of fire between naval forces, and it can therefore be claimed that in most cases they do not “carry the implications of war”.⁵⁶ This is not to say that there is no potential for escalation of such disputes. Despite the progress that has been made in recent years in the efforts to address collective marine management challenges in the Arctic, such as previously extensive illegal, unreported, and unregulated (IUU) fishing in the Barents Sea, all Arctic States want to secure their “slice of the pie”. Regulatory measures undertaken by one State, particularly in areas of unclear or disputed jurisdiction, may be interpreted by another State as biased and unjustified, rather than motivated by objective management needs, which may be a potential source of conflicts.

If a fishing vessel – with or without the backing of its flag State – refuses to abide by instructions given by the official forces of a coastal State and tries to escape punishment by fleeing, the coastal State may decide to resort to the use of force to immobilise it. The coastal State may also extend its jurisdiction onto the high seas to seize the vessel. The coastal State’s right of “hot pursuit”,⁵⁷ which is elaborated in Article 111 of UNCLOS,⁵⁸ ceases only when the ship pursued has entered the territorial waters of its own or a third State. If the flag State of the fishing vessel in question does not recognise the coastal State’s right of hot pursuit,⁵⁹ it may attempt to convince (or deter) it to abort

55 In 2006, a Japanese fisherman was shot and killed when a Russian patrol boat opened fire on a Japanese fishing schooner near Kaigara Island of the Southern Kuriles. See “Japanese Fisherman Killed in Kuriles Incident”, Radio Free Europe/Radio Liberty Newslines, 16 August 2006.

56 J. Weeks, D. K. Cohen, R. Herrings: Fishing Disputes, Regime Type, and Interstate Conflict, Paper presented at the Stanford International Relations Workshop, March 7 (2006), at 7.

57 Typically Coast Guard or Navy vessels, maritime patrol aircraft, or helicopters.

58 See article 111 UNCLOS available at: https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf.

59 N. M. Poulantzas, *The Right of Hot Pursuit in International Law*. M. Nijhoff (2002); M. N. Shaw, *International Law*, Cambridge University Press 9th edition, 424–425.

the pursuit. This can be by diplomatic means, or by the threat, display, or use of military force against the pursuers.

An interesting case was the so-called Elektron incident in October 2005, when a Norwegian Coast Guard vessel attempted to arrest a Russian trawler in the Svalbard Fisheries Protection Zone.⁶⁰ The trawler refused to follow instructions given by the Norwegians, and suddenly took off from its pursuers, with two Coast Guard inspectors still on board. This led to a three-day chase through the Barents Sea, involving four Norwegian Coast Guard vessels, two helicopters, and a maritime patrol aircraft. The pursuit continued through the Barents Sea "Loophole"⁶¹ and into the Russian EEZ, and was not aborted until the vessel crossed into Russian territorial waters.

Contrary to what many expected at the outset of the pursuit, the Elektron incident did at the time not escalate to become a militarised inter-State dispute between Norway and Russia. Instead, it was handled in a non-confrontational manner by diplomats, and later, the judicial system. Both parties exercised restraint with regard to the use of force. Because of the weather conditions at the time of the pursuit, with stormy weather and 30-foot waves, the Norwegian Coast Guard did not want to jeopardise the safety of the trawler and its crew by using excessive force to stop it. And despite numerous calls for a heavy-handed Russian response, particularly from the Murmansk-based Fishing Industry Union of the North, the Russian Navy did not get involved in the dispute. It did, however, dispatch a destroyer to the territorial line, where the "kidnapped" Norwegian officers were allowed to disembark the trawler. The Russian destroyer then escorted the trawler and its captain back to Murmansk for subsequent criminal proceedings. The Russian newspaper *Gazeta* reported that "the war with Norway has been called off".⁶² Incidents such as this one, where diverging views on the legal status of a recourse-rich maritime area lead to potentially dangerous confrontations at sea, are likely to happen again. The handling of the Elektron incident gives cause for optimism regarding the prospects for non-violent resolutions of such disputes. There is, however, no guarantee that future incidents will be handled in the same manner.

The pressure against the renewable marine resources of the Arctic is likely to increase, partly as a result of global climate changes and resource scarcities in other parts of the world, leading to frictions not only between neighbouring coastal States, but also between regional and outside actors. As water temperatures rise and the ice edge moves further north, the feeding areas of com-

60 For a detailed discussion, see K. Åtland, K. Ven Bruusgaard, *When Security Speech Acts Misfire: Russia and the Elektron Incident*, 40 (3) *Security Dialogue* 333 (2009).

61 The "Loophole" is a pocket of international waters in the central part of Barents Sea, surrounded by the Exclusive Economic Zones of Norway and Russia, and the Svalbard Fisheries Protection Zone.

62 Y. Zorin, E. Smirnov, *Voyna s Norvegiei otkladyvaetsya* [The war with Norway has been called off], *Gazeta*, October 20, 2005.

mercially important fish stocks are likely to follow suit, as will the fishing fleets of Arctic as well as non-Arctic States. This will place heavy demands on the coastal States' ability to regulate the harvest, hinder IUU fishing, and prevent the escalation of inter-State disputes.

7.2.4 Conflicts over access to shipping lanes

There are a number of lingering disagreements between some Arctic States concerning the legal status of the two main maritime transport corridors through the Arctic: the Northwest Passage (north of Canada) and the Northern Sea Route (north of Russia). The disagreements relate to issues such as the drawing of baselines, the outer borders of internal waters, the status of straits, and the right of innocent passage.

According to the Arctic Council's Arctic Marine Shipping Assessment, some 6000 vessels of various categories visit the Arctic marine area annually.⁶³ All but a few voyages (such as icebreaker cruises to the North Pole) take place in the periphery of the Arctic Ocean, where ice conditions are the most accommodating.⁶⁴ Traffic is particularly extensive along the Norwegian west coast and in the Barents Sea, as well as in the waters around Iceland and the Faroe Islands, southwest of Greenland, and in the Bering Sea. This traffic forms a mix of fishing, domestic cargo and cruise ships. Cargo vessels also regularly travel along the North Pacific Great Circle Route between Asia and North America, through the Aleutian Islands.⁶⁵ In the Barents Sea, much of the traffic goes to and from the port of Murmansk. In addition to naval vessels, ships travelling the Barents and Norwegian Seas include oil and LNG tankers, bulk cargo carriers, coastal ferries, fishing vessels, cruise ships, research vessels, and so on. There is also a sizeable year-round traffic of ice-enforced tankers and bulk carriers along the western part of the Northern Sea Route, between Murmansk and Varandey on the Pechora Sea (petroleum shipments from Western Siberia),⁶⁶ and between Murmansk and Dudinka in Siberia (nickel and copper shipments from Noril'sk).

63 AMSA Report, 2009, available at <https://oaarchive.arctic-council.org/handle/11374/54>; Analytical discussion on the Arctic Navigation has been conducted in Chapter 2 of this Thesis.

64 Marine Traffic in the Arctic, A Report Commissioned by the Norwegian Mapping Authority, available at: https://legacy.iho.int/mtg_docs/rhc/ArHC/ArHC2/ARHC2-04C_Marine_Traffic_in_the_Arctic_2011.pdf.

65 AMSA Report, 2009, online available at : <https://oaarchive.arctic-council.org/handle/11374/54> at 73f.

66 The Varandey terminal has shipped out total of 19 million tons of crude oil since the start-up in 2008, see respectively at <http://www.barentsobserver.com/10-million-tons-shipped-from-varandey-oil-terminal.4725304-16334.html>.

Despite significant reductions in the extent of sea ice in recent decades, traffic volumes along these routes are still fairly modest, and the traffic is mostly destinational (re-supply of local communities, transportation of natural resources out of the region, and cruise traffic), rather than trans-Arctic.⁶⁷ According to the Arctic Marine Shipping Assessment, this is likely to remain the situation in the foreseeable future. It is also possible to imagine scenarios in which trans-Arctic shipping becomes more attractive. In the coming decades, the sailing routes in question are likely to become ice-free for considerable parts of the year, particularly north of Siberia and the Russian Far East. This may, at least in theory, lead to an increase in traffic volumes, particularly in the event of a destabilisation of regions surrounding other strategic transit points such as the Suez and Panama Canals. Temporary or permanent increases in ship traffic in the Arctic may potentially heighten the risk of inter-State conflicts related to the use of major Arctic marine transport routes, regional as well as intercontinental.

The Northwest Passage goes along the northern coast of North America through the waters of the Canadian Arctic archipelago, around which Canada in 1985 drew straight baselines and simultaneously declared to be "internal waters."⁶⁸ This view is not shared by the United States, which considers the passages in question to be "international straits" subject to freedom of navigation, for commercial as well as State vessels.⁶⁹ The EU seems to take a similar view. While not explicitly addressing the status of the waters of the Northwest Passage, the 1988 Arctic Cooperation Agreement between Canada and the United States stipulates that navigation by US icebreakers in the waters claimed internal by Canada would take place with Canadian consent. This agreement temporarily stabilised the situation,⁷⁰ but applied only to icebreakers, assuming that any commercial vessel operating in these waters would require icebreaker assistance. This assumption may not necessarily be true in the future. Climate change may at some point turn the Northwest Passage into a commercially viable route for non-supported transits, seasonal or year-round, which may potentially heighten tensions between Canada and the United States and/or between Canada and the EU. An additional source of concern for the Canadians is the allegation that US nuclear submarines may have transited unannounced through Canadian Arctic waters. Such rumours circulated in

67 AMSA Report, 2009, online available at http://www.arctic.noaa.gov/detect/documents/AMSA_2009_Report_2nd_print.pdf, at 4–5.

68 D.R. Rothwell, *The Canadian-U.S. Northwest Passage Dispute: A Reassessment*, 26(2) *Cornell Int'l Law Journal* 331 (1993); R. Huebert, *Polar vision or tunnel vision: The making of Canadian Arctic policy*, 19(4) *Marine Policy* 343 (1995).

69 D.R. Rothwell, *The Canadian-U.S. Northwest Passage Dispute: A Reassessment*, 26(2) *Cornell Int'l L. Journal* 331 (1993).

70 J.C. Carman, *Economic and Strategic Implications of Ice-Free Arctic Seas*, in *Globalization and Maritime Power* Chapter 9 (Sam J. Tangredi ed., 2002) 171f.

2005, and provoked strong reactions in Canada.⁷¹ In recent years, Canada has taken steps to strengthen its military presence in the region, the Canadian parliament voted almost unanimously in favour of a bid to rename the country's Arctic seaway "the Canadian Northwest Passage".⁷²

On the other side of the Arctic, Russia's position is similar to that of Canada. Russia has drawn straight baselines around Novaya Zemlya, Severnaya Zemlya, and the East Siberian Islands, rendering the waters between the Russian mainland and the islands to be internal waters.⁷³ In fact, the entire "sector" between the Russian coastline and the North Pole is frequently described as Russian.⁷⁴ Russian and Soviet legal experts have long claimed that the straits along the Northern Sea Route "cannot be regarded as being used for international navigation, since the entire history of Arctic exploitation knows only extremely rare individual instances of passage through them by non-Russian ships".⁷⁵ The straits that connect the Barents, Kara, Laptev, and East Siberian Seas are seen as part of "a special legal regime [that precludes] their uncontrolled use by foreign seafarers".⁷⁶ Other countries, most notably the United States, have questioned the Russian position and claim that the straits are "international", and that the right of innocent passage for foreign vessels exists.

The Northern Sea Route, first established in the 1930s, was formally opened to international shipping traffic in July 1991. This was almost four years after Mikhail Gorbachev's 1987 "Murmansk Initiative", in which the Soviet leader took issue with security-related arguments against such a development.⁷⁷ In terms of distance, the Route offers significant savings compared to alternative routes between ports in Northwest Europe (e.g., Hamburg) and Northeast Asia/Northwest America (e.g., Yokohama, Hong Kong, Singapore, and Vancouver). For some destinations, distance savings can be as high as 50%. Distance savings would be even greater for traffic between high-latitude ports in Northern Europe (e.g., Northern Norway and the Kola Peninsula) and the Northern Pacific area (e.g., Alaska). For international shipping companies, savings in distance may lead to savings in time and money, and some analysts

71 C. Wattie, U.S. Sub May Have Toured Canadian Arctic Zone, National Post, December 19, 2005, at A1.

72 R. Boswell, Arctic sea route to be renamed 'Canadian Northwest Passage', The Vancouver Sun, December 3, 2009.

73 R R.D. Brubaker, The Legal Status of the Russian Baselines in the Arctic, 30(3) Ocean Development & Int'l L. 191 (1999), at 207.

74 A.L. Kolodkin, M. E. Volosov, The legal regime of the Soviet Arctic, 14(2) Marine Policy 158 (1990), at 163.

75 *Ibid.*

76 *Ibid.*

77 K. Åtland, Mikhail Gorbachev, the Murmansk Initiative, and the Desecuritization of Interstate Relations in the Arctic, 43(3) Cooperation and Conflict 289 (2008), at 304–305.

have estimated the savings could be as much as \$800,000 in fuel and labour per trip for a large freighter.⁷⁸

Still, as of today, there is considerable reluctance among foreign as well as Russian shipping companies to make use of Russia's northern waterway, particularly as an intercontinental route. As a rare exception, two German cargo ships from the Bremen-based Beluga Group, assisted by a Russian icebreaker, has conducted a successful journey along the entire length of the Northern Sea Route every summer since the summer of 2009 and on.⁷⁹ The journey went from east to west, and the vessels encountered very little ice throughout the transit. However, neither this nor other shipping companies have plans to start regular or year-round trans-Arctic operations. There is still too much uncertainty, which relates to factors such as the generally unpredictable ice conditions, the lack of infrastructure, the lack of search and rescue services, inter-State disagreements over the legal status of the waters and straits along the route, insurance-related issues and the terms and fees set by the Russian Northern Sea Route Administration.

In the distant future, intercontinental transits along routes further from the coastline – north of the Russian islands and north of the Canadian archipelago – could become a reality. Such a turn of events could create new legal and safety concerns (nuclear threats), very different from those that are associated with the current sailing routes.

7.3 TRADITIONAL MILITARY CONFLICTS

Since the end of the Cold War, the potential for "traditional" military conflicts in the Arctic has been reduced, but not eliminated. The region is still seen, particularly in Washington and Moscow, as an important arena for ballistic missile nuclear submarine (SSBN) operations, and for defence against conventional or nuclear missiles launched from land, sea, or the air. As a US naval official stated, "when you go through the Panama Canal, every terrorist and his brother knows you're there. When you go through the Arctic, no one knows you're there".⁸⁰ Unlike Antarctica, the Arctic is not demilitarised, and is unlikely to become so in the foreseeable future.⁸¹ Most likely, the deep and

78 A.L. Russell, *Carpe Diem: Seizing Strategic Opportunity in the Arctic*, 51 *Joint Force Quarterly* 94 (2008), at 96.

79 See *First through Northeast Passage*, *Barents Observer*, September 9, 2009, available online at <http://www.barentsobserver.com/first-through-northeast-passage.4629485-16175.html>.

80 Barry L. Campbell, Head of Operations at the US Navy Arctic Submarine Laboratory in San Diego, California, cited in C. Harrington, *Eyeing up the new Arctic: competition in the Arctic Circle*, 45(3) *Jane's Defence Weekly* 24 (2008), at 26.

81 Map shows the state of play in the Arctic Ocean with respect to the presence of military forces. see respectively online at <http://uk.businessinsider.com/chart-of-russias-militarization-of-arctic-2015-8?r=US&IR=T>. That was relevant till the end of 2021-then Russia started

partly ice-covered waters of the Arctic Ocean will remain a potential hiding place for missile-carrying nuclear submarines. The region may also become accessible to naval surface forces from Arctic and non-Arctic States. This is not to say that we should expect a radical increase in the range and scope of military activity in the Arctic but it should be recognised that the region is still seen, and will continue to be seen, as militarily important to at least some Arctic States.

Nuclear submarines can operate autonomously under the cover of the Arctic ice canopy for long periods of time. They can rise to the surface, push their way through several meters of ice, and take up firing positions anywhere in the Arctic Basin, including the North Pole. The Russian and US navies regularly rehearse these scenarios, including the launch of missiles. In 2007, two British sailors lost their lives in an accident aboard the *HMS Tireless*, a Trafalgar-class hunter-killer submarine, which was participating in a joint exercise with US submarines under the Arctic ice cap north of Alaska.⁸² For the first time in October 2009, a nuclear-powered United States attack submarine – the *USS Texas* – surfaced on the North Pole. Such operations require special training and are associated with significant danger, not only to the fragile Arctic environment, but also to the submarine crews.

In March 2021, three Russian submarines simultaneously broke through the ice near the North Pole.⁸³ Each boat could carry 16 ballistic missiles, and each missile could field multiple nuclear warheads. The submarines were soon joined by two MiG-31 aircraft and ground troops participating in Umka-2021, a Russian military exercise.⁸⁴

This exercise in March 2021 highlighted increased Russian military activity in the Arctic, but that was not the sole Russian signal. US Alaska Command, under US Northern Command, reported that they had intercepted more Russian military aircraft near the Alaska Air Defense Identification Zone in 2020 than at any other time since the end of the Cold War. In April, Secretary of State Antony Blinken stated that Russia is trying “to exert control over new spaces. It is modernizing its bases in the Arctic and building new ones.”⁸⁵ Russian Foreign Minister Sergei Lavrov responded by saying, “[w]e hear whining about

to reorganize its military forces in order to prepare for the war in Ukraine and its current state of play cannot be identified with a credible and definitive way.

82 Two Die in Accident on British Nuclear Submarine, AFP, March 21, 2007, available online at http://www.spacewar.com/reports/Two_Die_In_Accident_On_British_Nuclear_Submarine_999.html.

83 Information derived out from: <https://t.co/S0mVGzLosC>.

84 Information about the exercise can be found at: <https://www.thedrive.com/the-war-zone/39953/three-russian-ballistic-missile-submarines-just-surfaced-through-the-arctic-ice-together>.

85 Anthony Blinken’s comment can be found at: <https://apnews.com/article/arctic-europe-russia-business-technology-b67c5b28d917f03f9340d4a7b4642790>.

Russia expanding its military activities in the Arctic. But everyone knows that it's our territory, our land".⁸⁶

In Russia, the sea-based nuclear weapons on the Kola Peninsula and on the Pacific Coast are seen as an important part of the country's nuclear arsenal, contributing to upholding the country's status as a great power. However, compared to its Cold War equivalents, the Russian SSBN fleet has shrunk and is badly deteriorated. The construction of a fourth-generation class of strategic submarines (the "Borey" class) and the development of a new ballistic missile system ("Bulava") have been significantly delayed. As a result, the number of Russian submarine patrols in the Arctic is still fairly limited. Even though the military activity level in the North is lower today than it was in the days of the Cold War, military considerations still play a role in the formation of national strategies and policies.

Russia's strategic interests in the Arctic are closely related to the country's economic interests in the region because there is a widespread fear that other States may be tempted to take control over Russia's natural resources as the ice cover recedes.⁸⁷ This fear is often coupled with Russia's traditional fear of NATO, which is a central topic in Russia's security and defence planning, particularly with regard to the European Arctic:

"We think the situation is very dangerous and serious, and we also think that NATO [North Atlantic Treaty Organization] will transform from a defence alliance to a bloc which will fight for energy resources, and it will fight for its interests by military means [...] Since 2002–2003 the Norwegian Navy has had several warships protecting their fishing fleet off Spitsbergen [Svalbard], and I don't exclude that Russia might send its navy there too."⁸⁸

Along the same lines, a 2003 *Pravda* article titled "Spitsbergen: NATO's outpost under Russia's nose" listed a number of Russian security concerns pertaining to the archipelago of Svalbard. The article claimed that the Svalbard Environmental Protection Act⁸⁹ – a piece of legislation adopted by the Norwegian Parliament in 2001 – was aimed at hindering Russian mining activities and could be forcing Russia to abandon the archipelago. It also claimed that Norway was violating the demilitarisation clause of the 1920 Svalbard Treaty by allowing the construction and operation of radars and satellite stations that

86 Lavrov's response can be found at: "<https://apnews.com/article/arctic-europe-russia-business-technology-b67c5b28d917f03f9340d4a7b4642790>."

87 A. Smolovskiy, *Voyenno-strategicheskaya obstanovka v Arktike* [The Military-Strategic Situation in the Arctic], 11 *Morskoi sbornik* 57 (2006).

88 G. Dyer, *Climate Wars*, Random House (2009), 38.

89 Please see at: <https://www.regjeringen.no/en/dokumenter/svalbard-environmental-protection-act/id173945/>.

allegedly could be used in a United States missile defence scheme.⁹⁰ Norway's rejection of these allegations appears to have had little effect on mainstream Russian perceptions.⁹¹

Today, more than three decades after the end of the Cold War, Russia's relations with NATO are still marked by a startling lack of trust. This was illustrated for the first time by the 2006-2009 "missile defence" debate and the controversy over NATO's plans for further enlargement into the post-Soviet space, which ended up to be one of the excuses that Russia used in invading Crimea in 2014 and Ukraine 2022. Russia is also concerned that that ship-based missile defence systems may be deployed in the Arctic.⁹² Though not at Cold War levels in terms of frequency, Russia and the United States, maybe also the United Kingdom, are likely to maintain their ability to conduct SSBN and SSN operations in the Arctic Ocean and its adjacent waters, and this activity will inevitably entail the risk of incidents, accidents, or worse: an accidental launch of missiles. An increase in the number of naval surface vessels operating in the region can also not be excluded, as indicated by Canada's efforts to strengthen its naval presence in the northern waters. However, despite the numerous claims to the contrary, there are few indications of a "new Cold War" in the Arctic.

Russia is not the only authoritarian power with increased interest in Arctic affairs. In January 2018, Chinese officials published their first Arctic strategy document and attempted to buy and greatly expand Finland's Kemijärvi air base for use by large Chinese aircraft, ostensibly for Arctic research.⁹³ Their offer was rejected, supposedly because the northern airfield is next to Finland's Rovajärvi artillery range. This fits a pattern. China has built Arctic research stations, conducted ongoing oceanographic surveys, and attempted infrastructure development across the region, projects that some believe have geostrategic or military purposes.⁹⁴

In order to better position the United States for geopolitical competition in the region, the Biden administration should write and publish a new national security strategy for the Arctic. The United States has a moribund 2013 Arctic strategy that was superseded by events and ignored by the Trump

90 P. Rivetov, Shpitsbergen – forpost NATO pod nosom Rossii" [Spitsbergen: NATO's outpost under Russia's nose], Pravda online, April 14, 2003.

91 G. Dyer (2009), *supra*, 38.

92 U.S. could deploy missile shield in Arctic – Russia's NATO envoy, RIA Novosti, September 29, 2009, available online at <http://en.rian.ru/russia/20090929/156282845.html>.

93 The Chinese Arctic Policy can be found at: <https://www.uaf.edu/caps/resources/policy-documents/china-arctic-policy-2018.pdf>.

94 Swee Lean Collin Koh, China's strategic interest in the Arctic goes beyond economics, 2020, available at: https://www.defensenews.com/opinion/commentary/2020/05/11/chinas-strategic-interest-in-the-arctic-goes-beyond-economics/?utm_source=Sailthru&utm_medium=email&utm_campaign=EBB%2005.12.20&utm_term=Editorial%20-%20Early%20Bird%20Brief.

administration.⁹⁵ In 2019, the Office of the Secretary of Defense released an Arctic strategy, and the Air Force, Navy and Army each released their own subordinate strategies.⁹⁶ However, these individual strategies were not coordinated before being released, did not fully integrate efforts with civilian foreign policy agencies, and in some cases were produced only because of pressure from Sen. Dan Sullivan from Alaska.⁹⁷

7.3.1 Arctic security governance

In 2011, the Arctic Security Forces Roundtable (ASFR) was established upon the initiative of Norway and the US. It is a military-to-military forum, bringing together high-ranking military officers representing the Arctic states, France, Germany, the Netherlands and the UK. They generally discuss the increasing use of Arctic waters and examine how the deployment of national military and coast guard capabilities can support civilian authorities.⁹⁸ This platform provides a unique opportunity for stakeholders to cooperate, particularly on matters related to regional maritime security and emergency response capacity building.⁹⁹ The Arctic Coast Guard Forum (ACGF), established in 2016, has become a key venue for cooperation on 'soft' security.¹⁰⁰ It is functioning well, focussing on practical cooperation and the exchange of information on coast guard matters. Currently, there is no Arctic forum to discuss hard security issues that includes Russia, as the ASFR operates without Russian participation following the annexation of Crimea.¹⁰¹

7.3.1.1 An Arctic Security Forum (?)

According to some analysts 'Arctic exceptionalism' – the cooperation of the Arctic states in a world of growing geopolitical strife – might be en-

95 The USA Strategy can be found at: https://obamawhitehouse.archives.gov/sites/default/files/docs/nat_arctic_strategy.pdf.

96 The report of the Secretary of Defence can be found at: <https://media.defense.gov/2019/Jun/06/2002141657/-1/-1/1/2019-DOD-ARCTIC-STRATEGY.PDF>.

97 Senator Sullivan's suggestions can be found at: <https://www.sullivan.senate.gov/>.

98 The future of the Arctic: cooperation or confrontation? *Adviesraad Internationale Vraagstukken*, No. 90, September 2014, p.37.

99 Rachael Gosnell, Andreas Hildenbrand and Elizabete Aunina, *Emerging Challenges in Arctic Security and Recommendations for the Future: Perspectives from the European Security Seminar-North*, Garmisch Partenkirchen: The Marshall Center, September 2018.

100 Ulf Sverdrup e.a., *A Governance and Risk Inventory for a Changing Arctic*, p. 6.

101 Ulf Sverdrup e.a., *A Governance and Risk Inventory for a Changing Arctic*, p. 6; Rebecca Pincus, 'NATO north? Building a role for NATO in the Arctic', *War on the Rocks*, 6 November 2019.

dangered.¹⁰² One could argue that hard security matters need to be put on the political agenda when the region is discussed. For example, discussions could start on how to regulate military activities in the Arctic region – not replacing UNCLOS but setting specific rules for the international Arctic waters.¹⁰³ Others argue that there is little prospect of success in handling hard or political-military security issues while relations between the three superpowers remain tense.¹⁰⁴ Some experts claim that there are no hard security problems in the region and that the existing set of governance bodies should remain untouched.¹⁰⁵ The latter view neglects the potential impact of the trends and the risks associated with the growing geopolitisation of the Arctic. As elsewhere in the world, sooner or later tensions will increase further, incidents and accidents might occur, and conflicts and crises might arise. Thus, there seems to be sufficient reason to assess what forum, already existing or new, would be best suited to deal with political-military security issues in the Arctic.

Two important parameters should be considered when assessing the best option for discussing Arctic security. Firstly, all Arctic states should be included in such a forum. If resolving security tensions in the region is the objective, cutting off communication on political-military security issues with Russia is not the way to go. On the contrary, Russia's absence may even lead to increasing risks and uncertainties.¹⁰⁶ Clearly, this raises a significant political issue, to conduct 'business as usual' on Arctic political military matters with Moscow, while both the issue of Crimea and the conflict in Eastern Ukraine remain unresolved. Secondly, it is important to keep in mind that

102Ekatarina Klimenko, *The Geopolitics of a Changing Arctic*, Stockholm: SIPRI, December 2019;.

103 Heather A. Conley, *A New Security Architecture for the Arctic: An American Perspective*, Washington, DC.: Center for Strategic and International Studies, January 2012; Seth Andre Meyers, 'With Strategic Spillover Rising, Now Is the Time for an Arctic Security Forum', *World Politics Review*, 5 July 2016; Duncan Depledge, Mathieu Boulègue, Andrew Foxall & Dmitriy Tulupo, 'Why we need to talk about military activity in the Arctic: Towards an Arctic Military Code of Conduct', in: *Arctic Yearbook 2019 – Redefining Arctic Security*, edited by Lassi Heininen, Heather Exner-Pirot and Justin Barnes, November 2019.

104 Ragnhild Groenning, 'Why military security should be kept out of the Arctic Council', *The Arctic Institute*, 2 June 2016. Groenning argues that it would be counterproductive to introduce hard security issues in the Arctic Council as this would disrupt cooperation on other issues.

105 Kathrin Stephen, 'An Arctic Security Forum? Please, no!', *The Arctic Institute*, May 26, 2016; Adam P. MacDonald, 'Precarious existence or staying the course? The foundations and future of Arctic stability', in: *Arctic Yearbook 2019 – Redefining Arctic Security*, edited by Lassi Heininen, Heather Exner-Pirot and Justin Barnes, November 2019. Specifically, MacDonald argues that the Arctic's regional stability can remain even among increasing great power competition, due to the "region's geographic division of authority, strategic alignments, and state coherence (.) that has ensured stability and the emergence of a decentralized but robust regional order.

106 Klimenko, *The Geopolitics of a Changing Arctic*, p. 13, *supra* note 83.

ecological, economic and political-military security in the Arctic are closely interconnected. Hence, it might be useful to discuss military matters in a wider set-up than military to military talks, in order to connect them with the actors dealing with economic and ecological security. Taking these two parameters into account, only two of the existing forums would be candidates.

7.3.1.2 Using the existing forum

– *The Arctic Council*

Military security is per mandate excluded from the Arctic Council's agenda. Nevertheless, this forum can still prove to be useful for political-military security matters. Firstly, the Arctic Council is already used for discussing soft security issues, related to economic activities, ecological matters, tourism and other matters: SAR, responding to environmental disasters, etc. A new working group could be established, focussing on the military use of Arctic waters, which in due course could result in a set of measures to prevent misunderstanding and resolve incidents, to make military activities more transparent and to strengthen military cooperation.

A more radical solution would be to create an Arctic security and cooperation organisation. This idea was coined by the US Secretary of State Mike Pompeo May 2019 in Rovaniemi, Finland.¹⁰⁷ Such a fundamental change to the nature of the Arctic Council would require a new mandate, based on a unanimous decision by all its members.¹⁰⁸ Setting up a new working group to deal with military security might be politically more attractive, particularly as it could build on already existing soft security issues. On the downside, bringing military matters to the Arctic Council could spoil the ongoing cooperation on other issues – thus having a counterproductive result. It seems that most members of the Arctic Council object to the inclusion of political military matters. Therefore, such a fundamental change is not feasible. Hence, the Arctic Council's mandate should remain as it is, thereby providing the best guarantee for continued cooperation between all Arctic states on matters other than political military security.

Reference must be made to the fact, that due the ongoing War in Ukraine due to the unlawful invasion on behalf of Russia to the territory of Ukraine, the Arctic Council has paused all of its activities until further notice.¹⁰⁹

– *The Arctic Security Forces Round Table*

107 Looking North: Sharpening America's Arctic Focus, Speech by Michael R. Pompeo, Secretary of State, in Rovaniemi Finland, 6 May 2019.

108 Van Schaik and Dams, *The Arctic Elephant*, p. 9 Available at: <https://www.clingendael.org/publication/arctic-elfphant-europe-geopolitics-high-north>.

109 See the announcement of the Arctic Council is available at: <https://arctic-council.org/>.

Another option is to expand the mandate and composition of the ASFR. The main problem with this option is the absence of Russia at the ASFR meetings mainly due to its aggressive war in Ukraine. Politically, it seems possible that Russia may have a standing invitation to participate in the ASFR meetings upon the termination of the War against Ukraine and the normalization of its relationship with the West. Moscow prefers ASFR meetings between the Chiefs of Defence Staff.¹¹⁰ Since Russia no longer participates in ASFR meetings, these are now held in two formats: one for exchanging open source information on military matters, including how to increase practical cooperation, e.g. when military assets are needed to address emergencies, and a so-called Northern Flank format in which Finland, Sweden and the NATO ASFR countries discuss Arctic military security matters including on the basis of classified information. As such, the first ASFR format seems to be the right forum to restart the discussions with Russia on political-military matters. At the moment, the prospects of resuming ASFR meetings with Russian military participation might not look favourable or even possible, based on Russia's attitude. Nevertheless, the option should not to be excluded in the future at the aftermath of the restoration of peace in Ukraine. If relations with Moscow were to improve in the wider sense, the Russian approach might also start to change, which could create a window of opportunity for discussing political-military matters within the ASFR.

An even more ambitious approach could entail the expansion of the ASFR with the inclusion of China and the EU and potentially the chair of the Arctic Council, thus resulting in the establishment of an inclusive Arctic security and cooperation organisation.¹¹¹ However, this would require an even higher degree of improved relations in the China-Russia-US triangle. Moreover, both Russia and the US have expressed their objections towards the inclusion of China in such matters. For Russia, China is welcomed as an economic actor, but should not have a security presence or become an institutional actor in the Arctic.¹¹² It appears that this approach is not feasible if Russia and the US do not change their stance on the expansion of the ASFR.

7.3.2 The option of multilateral organisations

Apart from the European Arctic states, other European countries also have, to varying degrees, a stake in Arctic security, depending on their national security interests: France, Germany and the UK, but also the Netherlands,

110 Tony van der Togt, *Conflict Prevention and Regional Cooperation in the Arctic*, Clingendael OpEd, October 2019 (hereafter 'Van der Togt').

111 Van Schaik and Dams, *The Arctic Elephant*, p. 10, *supra* note 89.

112 Laruelle, *Russia's Arctic Policy*, p. 29 Available at: https://www.ifri.org/sites/default/files/atoms/files/laruelle_russia_arctic_policy_2020.pdf.

Poland and the Baltic States. In essence, geopolitisation turns Arctic security into a matter for all European countries– and even for the whole globe. Below, the three major multilateral organisations that are relevant to European security are assessed concerning their roles in Arctic security.

7.3.2.1 *The EU*

The EU is already active in the working groups of the Arctic Council, while it still has no formal observer status – an issue that is often overrated in political terms as the EU is present at all ministerial and ambassadorial meetings of the Arctic Council. As the EU has broad responsibilities, encompassing all sectors of national government, the EU-Russia dialogue could be suitable to engage with Moscow on issues of the interconnectedness between ecological, economic and political-military security. Clearly, formal EU meetings are limited to its members, which excludes important Arctic States. It will be essential for the EU to associate the non-EU Arctic countries (Canada, Iceland, Norway, the US) as well as post-Brexit UK to the maximum extent with its own policy development. However, the exclusion of five of the eight Arctic States from the EU-Russia dialogue itself would probably make this option a non-starter. As the former US President Trump regularly portrayed the EU in negative terms, this proposal seems to be even more unrealistic in political terms.¹¹³ An alternative for increasing the EU's role would be to give the organisation a more prominent role in the Arctic Council. Even though states like Sweden and Finland favour a more prominent role for the EU in the Arctic, politically this seems to be unattainable; even granting the EU observer status within the Arctic Council has been out of reach.¹¹⁴

7.3.2.2 *NATO*

Given its origin and nature, NATO would be a suitable forum to discuss and coordinate security cooperation in the Arctic. Even though the Arctic has gained prominence on NATO's agenda, the organisation has not yet developed an Arctic strategy. This is unlikely to happen. NATO's primary interest is not the Arctic but unrestricted use of the North Atlantic sea lanes linking continental US to Europe. Furthermore, several Arctic States seem to object to NATO's involvement in Arctic security as it might have a counter-productive effect on engaging with Russia on these matters. So far, Denmark has been reluctant to do so.¹¹⁵ Where Canada used to take a more reluctant stance as well, it

113 Please see also the analysis of the EEAS on EU-Arctic Policy published in the beginning of March 2022, available at: https://eeas.europa.eu/headquarters/headquarters-homepage_en/20956/EU%20Arctic%20policy.

114 Van Schaik and Dams, *The Arctic Elephant*, p.6, *supra* note 83.

115 Van der Togt, p. 3., *supra* note 90.

has recently shown a greater willingness to bring NATO into Arctic affairs as a response to a militarising Arctic region.¹¹⁶ A complicating factor is also that not all Arctic states are represented in NATO, such as Sweden and Finland. The engagement of China is less likely in a NATO context. Concerns regarding increasing tensions with Russia could be addressed through shifting Arctic security from being discussed solely within NATO toward discussions in the NATO-Russia Council.¹¹⁷ Perhaps, Finland and Sweden – both countries already cooperate closely with NATO – can be invited to NATO-Russia Council meetings on Arctic security. Nevertheless, any forum with the title ‘NATO’ is most likely to generate a negative response from Moscow. Another downside of the NATO context is the political-military focus without much connectivity to the ecological and economic actors.

7.3.2.3 Organization for Security and Cooperation in Europe (OSCE)

Another potential platform to initiate a debate on military-security issues in the Arctic is the OSCE. Its broad membership that includes all Arctic States on an equal basis makes this organisation a useful forum. In addition, the OSCE’s comprehensive security mandate makes it an appropriate platform where both soft and hard security issues can be discussed in a sub-regional context. Raising Arctic issues in the OSCE could be done in the Permanent Council, in the Forum for Security Co-operation or in informal frameworks as well as within the context of the Economic and Environmental Dimension – even better, in a combined mode to encompass the three major elements of Arctic security. For now, the Arctic States show little or no willingness to discuss Arctic security matters in the OSCE, which makes this option politically unfeasible.¹¹⁸ Moreover, to discuss hard security issues through the OSCE would require that both the US and Russia should be convinced of the benefits of addressing the topic in a multilateral setting, instead of the adoption of a unilateral or bilateral approach or using a regional forum such as the Arctic Council.¹¹⁹ Finally, given the deep divisions within the OSCE over political-security issues elsewhere in the OSCE area, some of its other participating States which have no essential interests in the Arctic could use the OSCE format to spoil discussions on that region.¹²⁰

116 Rob Huebert, ‘Canada and NATO in the Arctic: Responding to Russia?’, in: *Canada’s Arctic Agenda: Into the Vortex*, edited by John Higginbotham and Jennifer Spence, Waterloo, ON.: Centre for International Governance Innovation, 2019.

117 Van der Togt, p. 3., *supra* note 90.

118 *Ibid.*

119 *Ibid.*

120 OSCE Special Representative’s report on the Arctic of November 2021 can be found at: <https://www.oscepa.org/en/documents/special-representatives/arctic-issues/report-24/4283-report-of-the-special-representative-on-arctic-issues-for-the-19th-osce-pa-autumn-meeting-3-november-2021/file>.

However, the experience of the OSCE regarding risk reduction, incident prevention, confidence-building measures and promoting military transparency in other regions could be made use of in the Arctic, for example by using some of the tools contained in the Vienna Document.¹²¹ The OSCE Parliamentary Assembly also pays increased attention to the Arctic, through the appointment of a Special Representative for Arctic Issues.¹²² It could serve as a channel for parliamentary diplomacy, including on environmental security issues.¹²³

7.3.3 An alternative Arctic security forum?

Theoretically, both of the existing Arctic forums and the three multilateral organisations could be suitable to address the political-military aspects of Arctic security, but in practice they are difficult to realise for political reasons. Subsequently, the question arises whether an alternative Arctic security forum should be created. An answer can only be given by considering the vital elements which establish the common denominator. Based on the analysis in this Chapter, these are:

- The involvement of all Arctic States;
- The willingness to invite other interested states to the table;
- In due course, broadening the scope and participation if a security forum would start to discuss preventive measures and arrangements for de-escalation in times of increasing tensions.

It seems that transforming the ASFR could result in a forum fulfilling these criteria – perhaps with a new name, underlining a broader mandate and a more inclusive composition. First, a high-level political-military attempt could be made to convince Moscow that it is better to take its seat in the ASFR than continuing its policy of absence. If Russia would persist in its attitude of non-participation, then another approach could be to consign the ASFR into history and to establish a new forum to replace it. The agenda could then immediately be broadened to encompass talks on military stability and conflict prevention measures in the Arctic region. Such a new format could be called the Arctic Security Cooperation Forum (ASCF). It should consist of the eight Arctic states plus the most interested other European countries (France, Germany, the Netherlands and the UK). The EU and NATO could be invited on a case-by-case basis. One could think of a second ring of associated countries, e.g. China and other interested European states such as Poland and the Baltic States. Officials

121 Loïc Simonet and Veera Tuomala, 'How can the OSCE help to reduce the risk of hazardous military incidents?', *NATO Review*, 2 November 2016.

122 The appointment took place in 2017 [new one in 2021] – relevant information can be found at: <https://www.oscepa.org/en/activities/special-representatives/arctic-issues>.

123 *Ibid.*

of foreign and defence ministries, on a case-by-case basis reinforced by representatives from ministries dealing with economic and ecological issues, should be represented. The same cross-government composition should apply to the ministerial level. It should be noted, however, that the establishment of a new and broader Arctic security forum is currently met by scepticism on the part of various Arctic states.¹²⁴ Canada and Denmark prefer that the Arctic states should first discuss matters of a political-military nature themselves, before this is expanded to include others.¹²⁵ Finland is also not an advocate of a new forum, but prefers to hold a security meeting within the Arctic Council.¹²⁶ In turn, Norway claims that a new forum is superfluous, given that matters of security are already discussed in other forums, such as the Nordic Council and NATO.¹²⁷

7.4 MEETING THE NEW SECURITY CHALLENGES

7.4.1 Mitigation and adaptation strategies

It is uncertain whether, how, how much, and how soon the process of climate change will alter security dynamics and security politics in the circumpolar Arctic.¹²⁸ What is clear, is that changes in the region's physical environment – the exact rate of which is still uncertain – are likely to present policy planners and political decision-makers with an array of challenges that will require extraordinary measures at the national as well as the regional and international levels.¹²⁹ Polar ice melting, sea level rise, permafrost thaw, and coastal erosion may force governments and international organisations to rethink traditional security concepts and develop appropriate strategies aimed at mitigation and adaptation.¹³⁰ The term “mitigation” here denotes any action taken to reduce or eliminate the causes of climate change, such as cuts in greenhouse gas

124 Hong, N. (2021). “Chapter 16 Non-Arctic States’ Role in the High North: Participating in Arctic Governance through Cooperation”. In *Marine Biodiversity of Areas beyond National Jurisdiction*. Leiden, The Netherlands: Brill | Nijhoff. doi: https://doi.org/10.1163/9789004422438_017.

125 *Ibid.*

126 Please see the press release by the Finish Government available at: <https://valtioneuvosto.fi/en/-/10616/report-discusses-finland-s-new-role-in-the-arctic>.

127 Please see the information available at: <https://www.norden.org/en/news/new-era-nordic-defence-every-nordic-country-member-nato>.

128 A.J.K. Bailes, *The Small Nations of the Wider Arctic Space: Security Challenges, Policy Options*, 6 *The Yearbook of Polar L.* 598 (2014).

129 R. Pincus, *Security in the Arctic: A Receding Wall*, in *Diplomacy on Ice: Energy and the Environment in the Arctic and Antarctic* 161 (R. Pincus, S. H. Ali eds., 2015).

130 O.S. Stokke, *International Environmental Governance and Arctic Security*, in *Geopolitics and Security in the Arctic: Regional Dynamics in a Global World* 121 (R. Tamnes K. Offerdal, eds., 2014).

emissions. The term “adaptation” refers to the ability of the international community to adjust to the consequences of climate change in order to moderate harm and/or take advantage of possible new opportunities. Most likely, we will see a combination of mitigation and adaptation strategies at various levels.¹³¹

In the Arctic, the indirect effects of climate change as a potential “multiplier” of existing or latent intra- and inter-State disputes may not be less severe than its direct effects on the Arctic environment. Seen from a security perspective, the two types of challenges are inherently different, and will require different countermeasures undertaken by different actors. Military planners are, for obvious reasons, most preoccupied with the second type of concerns. Environmental security challenges, in the Arctic or elsewhere, cannot be averted by the threat, display, or use of military force, and they are typically dealt with in different fora than State security challenges. At the same time, efforts to address the immediate causes of the problem (e.g., limiting greenhouse gas emissions) and to reduce the pace of anthropogenic change, may lower the risk of secondary effects. These include conflicts over access to increasingly scarce renewable and non-renewable natural resources and/or emerging marine transport routes.

The apparent interconnectedness between the direct and the indirect effects of climate change is neither fixed nor total. It is, at least in theory, fully possible to imagine climate change, even dramatic climate change, without political destabilisation and conflict. Central intervening variables in the relationship between climate change and conflict are the roles played by governments, political institutions, and regional and international organisations in managing the process of environmental change and containing potential intra- and inter-State tensions. Under some conditions, the adverse impacts of climate change may even lead to increased dialogue and cooperation between States that are facing the same or similar challenges and facilitate the settlement of long-standing disputes such as those in the circumpolar Arctic. Contributions towards this aim can be made at several levels.

At the national level, all States that surround the Arctic Ocean should work to secure their short-, medium- and long-term strategic and economic interests in the region. The region’s new role as a potential energy province and transport corridor raises the stakes for all parties involved. None of the Arctic States seems to be willing to offer substantial concessions to its neighbours in the name of regional stability,¹³² which may increase the level of inter-State tension. On the other hand, all Arctic States recognise the crucial role of international law, including UNCLOS, in the settlement of current and future

131 *Ibid.*

132 One of the first reactions on behalf of Russia as a response to the sanctions on behalf of the western nations due to the Crimea crisis was to freeze the Arctic Cooperation projects at any stage and at any international initiative.

inter-State disputes over access to maritime and shelf areas in the region.¹³³ Unlike other and more conflict-prone regions, the Arctic is a region of economically developed and politically stable countries, which have a long tradition of peaceful coexistence. Thus, even though the effects of climate change on ecosystems are likely to be more extensive in the Arctic than in many other places, the consequences for regional peace and stability may turn out to be less severe here than in many other parts of the world, such as sub-Saharan Africa.

At the regional level, institutionalised cooperation arrangements such as the Arctic Council and the Barents Euro-Arctic Council can play an important role in the maintenance of regional stability. These and other components of the multi-faceted system of Arctic governance do not have the authority to make formally binding decisions on legal or other matters. They are, however, important arenas for interaction and cooperation among Arctic States on issues of common concern. For instance, by initiating regionally-oriented academic studies such as the Arctic Climate Impact Assessment and the Arctic Marine Shipping Assessment, the Arctic Council has drawn the attention of its member States and the outside world to emerging security and other concerns in the region, and created common understandings of possible ways to combat them. Central in this regard is the Council's role as a "soft law" institution, as illustrated by the process leading up to the adoption of the updated Arctic Offshore Oil and Gas Guidelines in 2009.¹³⁴

Finally, the issue of climate change, and its security implications for the Arctic region, should also be dealt with at the international level. The observed increases in air and water temperature in the Arctic and the melting of sea and glacial ice are not only regional, but also global security concerns. Processes taking place in the northern part of the globe are likely to affect the rest of the world in a number of ways, most notably through sea-level rise. The driving forces behind the process of global climate change will have to be addressed in a collective manner, and few organs are better equipped to coordinate the effort than the United Nations. In addition to coordinating global processes addressing the source of the problem, the UN system can assist the Arctic States in settling disputes. Most importantly, the Arctic States can draw on tools such as UNCLOS, and increasingly relevant UN organs, such as the CLCS and the IMO.¹³⁵

133 This issue has been exhaustively discussed in the first part of this thesis.

134 More about the agreements adopted by the Arctic Council can be found at Chapter 4 on Arctic Governance.

135 Further analysis on the role of the CLCS and the IMO has been made on the relevant Chapters of this Thesis.

7.4.2 Implications for military planners¹³⁶

The ongoing changes in the physical environment of the Arctic are likely to have a profound impact not only on national, regional, and international political agendas, but also on the future task portfolio of navies and coast guards, particularly those of the Arctic coastal States. The direct and indirect effects of climate change may lead to changes in the way military capabilities are used on land, in the air, and in space. On a general level, a number of “issue areas” have been identified that deserve the attention of military planners and political decision-makers in Arctic States, in the years and decades to come:

Cold weather operations: The ability to conduct military operations in harsh climatic conditions is like to remain important, not only to the Arctic rim States, but also non-Arctic States operating in mountainous and/or cold regions elsewhere in the world (e.g., Afghanistan). Such operations require special training and preparation, and place heavy demands on equipment and logistics. Given its northern location, and as host nation to NATO’s Center of Excellence for Cold Weather Operations (COE-CW), Norway has a high level of competence in this field. This competence should be maintained and further developed, to the benefit of allies and partner States doing winter training in Norway.¹³⁷

Arctic maritime domain awareness: Within the Arctic maritime domain, it is important to raise awareness of the complex challenges that naval, coast guard, and commercial shipping organisations, as well as the petroleum and fishing industries, may face in the future. A central point is the need to further strengthen inter-service and inter-agency coordination and cooperation at the national level, to optimise information sharing and situational awareness within the Arctic maritime domain.¹³⁸

Ocean and air surveillance: An increase in ship traffic and/or other commercial activities in parts of the Arctic, such as the Barents Sea, will require an improved ability to monitor what is going on the ocean surface at any given time (ship movements, pollution, sea ice, etc.), as well as in the airspace above it. This presupposes the integration of information from sources such as satellites, ship tracking systems (AIS), land-based radars, maritime patrol and

136 B. Nichiporuk, *Alternative Futures and Army Force Planning*, Aroyo Center, available online at http://www.rand.org/content/dam/rand/pubs/monographs/2005/RAND_MG219.pdf.

137 US Department on Defence, *Report to Congress on Arctic Operations and the Northwest Passage*, available at http://www.defense.gov/pubs/pdfs/Tab_A_Arctic_Report_Public.pdf.

138 *Ibid.*; *Fleet Arctic Operational Game*, U.S. Naval War College Newport, Rhode Island, available at <https://www.usnwc.edu/getattachment/Research---Gaming/War-Gaming/Documents/Publications/Game-Reports/FAOG-Game-Report-Final.pdf>.

other fixed-wing aircraft, helicopters, coast guard and naval vessels, and so on. There is reason to believe that the space-based component of the surveillance system will become more sophisticated in the future, and provide better coverage. For instance, the launch of the “AISSat-1” – a nano satellite developed at FFI – may significantly improve the monitoring of maritime activities in the European Arctic. It is also important to facilitate the cross-border exchange of data at the regional level and the “Barents Watch” project in Northern Europe is an interesting pilot project in this respect.

Enforcement of fishery regulations: The management of the Arctic’s living marine resources and the prevention of illegal, unreported, and unregulated (IUU) fishing in the northern waters are likely to remain important tasks for the coast guards of Arctic coastal States. The northwards movement of fish stocks, due to rising waters temperatures, may create additional challenges as fish stocks move from one State’s EEZ to another. The management of joint fish stocks will require enhanced bilateral and multilateral cooperation and a credible presence by coast guard vessels on the major fishing grounds, which may also contribute to the prevention of inter-State fishery disputes.¹³⁹

Enforcement of marine transportation regulations: The Arctic coastal States have a common interest in making sure that national and international regulations governing ship traffic in the Arctic are enforced and complied with. This is important to prevent ice-related or other accidents or oil spills in the Arctic Ocean and surrounds. The IMO and regional cooperation arrangements such as the Arctic Council will hopefully continue to play an important role in the drawing up of regulations and “soft law” guidelines for marine transportation and cruise traffic in the Arctic. Their efforts cannot be successful without an adequate enforcement presence at sea.¹⁴⁰

Search and rescue operations: An increase in industrial activity, fisheries, and/or ship traffic in the Arctic could render current search and rescue (SAR) systems inadequate, particularly in maritime areas far from the shore. As noted in the 2008 Ilulissat declaration, there is a need to strengthen SAR capabilities and capacity in and around the Arctic Ocean as in large parts of the region, SAR resources are still scarce with limited reach. The number of passengers on cruise ships operating in the Arctic often exceeds the capacity of the available SAR response vessels and aircraft. The shortcomings in Arctic emergency response preparedness may be alleviated through a strengthening of national SAR assets, enhanced bilateral cooperation, and the adoption of an Arctic SAR Treaty under the auspices of the Arctic Council.

139 Detailed discussion has been made in Chapter 3.

140 Please see Chapter 2 of this Thesis for further analysis on that respect.

Tugboat capacity: In regions of considerable or growing tanker traffic, such as the Norwegian West Coast, the availability of tugboats may be a source of particular concern. In the event of an engine failure or some other kind of emergency, particularly in rough weather and/or in waters close to the coastline, unsatisfactory availability of relevant rescue capabilities could result in a major environmental disaster. Some coast guard vessels may be used as tugboats, whereas others may not, depending on weather conditions and the size of the vessel in distress, while in some scenarios, specialised civilian tugboats are preferable. In any event, attention must be paid to tugboat availability and cooperation between all relevant agencies must be optimised.¹⁴¹

Maritime security operations: As the sea ice retreats and the Arctic region becomes more accessible than before, the “constabulary tasks” in waters adjacent to the Arctic Ocean may increase in scope and number. An increase in ship traffic and other forms of human activity in the region may lead to an increase in smuggling or illegal migration. Other and more serious forms of illegal activity, such as piracy and sea-based terrorism, seem less likely in the Arctic than in most other maritime areas, at least in the foreseeable future, due to the absence of land-based infrastructure.¹⁴²

Submarine and anti-submarine warfare operations: Due to its geographical location, size, water depths, and ambient noise conditions, the Arctic Ocean is likely to remain a potentially important arena for strategic nuclear submarine operations. However, as large parts of the Arctic Ocean become open water, anti-submarine warfare operations may become more efficient, and submarines may become easier to track from the surface. Stealthy diesel-electric submarines will continue to have a role as surveillance assets and defensive weapons close to the shore.

Communication systems: Developments such as those described above may require a strengthening of C4ISR¹⁴³ interoperability. Given the anticipated complexity of future coast guard, naval, or joint operations in the Arctic, the interoperability of communication systems is likely to become an important issue. The need for interoperable communication systems is evident at inter-State level. This issue area includes not only technical solutions, but also user competence and language skills.

141 A very important analysis on this respect can be found online at <http://www.fastcompany.com/1755444/watch-tugboat-drag-arctic-iceberg-parched-people-half-world-away-video>.

142 *Supra* note 134.

143 Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance, for some further information on that technology please see : <https://www.lockheedmartin.com/en-us/capabilities/c4isr.html>.

Bathymetric mapping: Knowledge about underwater topography is essential for most, if not all, naval operations. Bathymetric charts may improve the safety of surface as well as sub-surface navigation, and help ASW forces to detect foreign submarines operating in both deep and shallow water. Not all Arctic waters are sufficiently charted, and additional surveying is needed in order to produce new and more detailed maps. This is especially true for areas that are ice-covered, where few bathymetric data are available.¹⁴⁴

Weather and ice forecasting: The ability to predict meteorological, oceanographic, and sea ice conditions is an essential part of military exercises and operations in the Arctic. Meteorological and oceanographic data need to be tailored to the needs of the forces using them. The forecasts may vary in detail, duration, and geographical scope, depending on the location and operational needs of one's vessels and/or aircraft. Also, merchant ships operating in the Arctic will need high-quality weather and ice data.¹⁴⁵

Knowledge-building: Military planners – and the institutions that employ them – should work towards a higher level of understanding of the various aspects of climate change, as well as its potential security implications in regions such as the Arctic. The changes in the physical environment of the region may, as noted above, have significant bearing on the region's future as an arena for naval and coast guard operations. It may also lead to changes in geopolitical dynamics and Arctic inter-State relations. Multidisciplinary research and interaction with non-military institutions at home and abroad can make military planners better equipped to meet the future challenges of climate change.¹⁴⁶

7.5 PRELIMINARY CONCLUSIONS

This Chapter has elucidated various aspects of the process of climate change and its security implications in the northernmost part of the globe. The dramatic changes that are taking place in the circumpolar Arctic – ice melting, permafrost thaw, coastal erosion, sea level rise, etc. – are likely to have a major impact on the security situation of the countries that surround it, as well as the rest of the world, in the decades to come. The changes raise several new

144 Jakobsson, M., Mayer, L.A., Bringsenparr, C. et al. The International Bathymetric Chart of the Arctic Ocean Version 4.0. *Sci Data* 7, 176 (2020). <https://doi.org/10.1038/s41597-020-0520-9>.

145 Jun Inoue, Review of forecast skills for weather and sea ice in supporting Arctic navigation, *Polar Science*, Volume 27, 2021,100523, ISSN 1873-9652, <https://doi.org/10.1016/j.polar.2020.100523>.

146 The abovementioned information has been extracted out of military books belonging in the Arctic States.

environmental security concerns, as well as concerns related to the dynamics of inter-State relations and the danger of a “remilitarisation” of the region. The direct and indirect impacts of climate change, and their consequences for political and military planning at various levels, are still not fully understood so further research is needed. The dialogue between natural scientists and social scientists on the topic of climate change is still fragmented, and few social scientists have begun to explore the vast amounts of data that natural scientists have provided in recent years. Similarly, natural scientists are not always aware of the facets of climate change that social (e.g., political) scientists are most interested in, such as the “peace and conflict” dimension.

In recent years, it has become fashionable, at least in the press, to talk about the Arctic in terms of potential conflicts. The region is often described as an arena where states are preparing for a future “resource race” and a new “great game”. However, the link between climate change and conflict is far from self-evident. There are many intervening variables such as the role of governments, regional and international institutions, and international law. Despite the number of unresolved issues pertaining to borders and jurisdiction in the northern waters, they are not necessarily more complex or numerous than those in maritime areas of comparable size elsewhere in the world. In addition, the Arctic is a generally peaceful region, surrounded by politically stable and economically developed countries which, despite their disagreements, have a long tradition of cooperation and peaceful coexistence at the regional level. This provides a basis for cautious optimism over the prospect of peaceful resolution of remaining issues. The settlement of legal disputes and establishment of “rules of the road” for shipping and offshore petroleum activities can assist in improving the prospects for a peaceful, stable, and prosperous Arctic.

The first invasion of Russia to Ukraine in 2014 and the illegal annexation of Crimea¹⁴⁷ has had a major impact on the Arctic Cooperation which has been immediately become a “non-issue” for any of the parties of the dispute.¹⁴⁸ Crimea was a turning point on that respect, since after 2014 almost every significant initiative was frozen and the issue of military security and the use of military forces to maintain stability and security in the region was prevailing contrary to what was happening the previous years where the

147 William W. Burke-White (2014) Crimea and the International Legal Order, *Survival*, 56:4, 65-80, DOI: 10.1080/00396338.2014.941548.

148 A very important and interesting analysis on that respect has been made by the Brookings Institute and can be found available at: <https://www.brookings.edu/blog/order-from-chaos/2022/01/31/lessons-from-ukraine-for-the-arctic-russian-dialogue-isnt-always-what-it-seems/>.

vocabulary of collaboration and cooperation was the most relevant one with respect to the Arctic Issue.¹⁴⁹

149 Relevant literature on that respect includes among others the following papers: Pavel Baev, *Russia's Ambivalent Status-Quo/Revisionist Policies in the Arctic*, 2019, available at: <https://arcticreview.no/index.php/arctic/article/view/1336>; V. Konyshov and Sergunin, A, *The Changing Role of Military Power in the Arctic*, 2019, available at: https://link.springer.com/chapter/10.1007/978-3-319-91995-9_11; A.Sergunin, *Subnational Tier of Arctic Governance*, 2018, available at: https://link.springer.com/chapter/10.1007/978-3-319-91995-9_16.